

REMARKS

Summary Of The Office Action & Formalities

Claims 1-10 are all the claims pending in the application.

The Examiner has withdrawn the art rejections set forth in the last office action and now rejects the claims as follows:

1. Claims 1-5 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Burt (US 6,444,968) in view of Stoffel (US 4,712,018).
2. Claims 6-10 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Ulich (US 5,013,917) in view of Burt (US 6,444,968) and Stoffel (US 4,712,018).

Applicant respectfully traverses.

Claim Rejections - 35 U.S.C. § 103

1. Claims 1-5 Over Burt (US 6,444,968) In View Of Stoffel (US 4,712,018).

In rejecting claims 1-5 over Burt (US 6,444,968) in view of Stoffel (US 4,712,018), the grounds of rejection state:

Referring to claims 1 and 5, Burt shows a method of detecting a light signal comprising the conversion of light signal into electric charges (column 1 line 54 to column 4 line 55), periodic sampling (column 1 line 54 to column 4 line 55), chained movement of samples through a memory towards a processing device (column 1 line 54 to column 4 line 55), and samples subjected to amplification by multiplication (column 1 line 54 to column 4 line 55). However Burt does not show an image area that is stepped through each row of the memory region.

Stoffel shows an image region that is only one row of photosensors and if the photosensors of Burt are replaced with the photosensors of Stoffel and the method of reading the photosensors was unchanged the image area would step through each row of the

memory region. It would have been obvious to modify Burt to include the single row of photosensors taught by Stoffel because this allows for continuous imaging without having to wait for the memory region to clear before the next image is taken.

Referring to claim 2, with the combination of Burt and Stoffel the image area includes only one row.

Referring to [claims] 3 and 4, if the control voltage is in reference to the timing of the shifts along the columns, Burt shows a control voltage that controls the shift along the columns (column 4 lines 38-50). If the control voltage is in reference to the amplitude of multiplication that the signal will encounter upon entering the processing device Burt shows a gain control (figure 1 Ref 11).

Office Action at pages 2-3. Applicant respectfully disagrees.

The Manual Of Patent Examining Procedure ("MPEP") which states:

To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.

MPEP at Section 2143.

The Federal Circuit has made it clear that the USPTO is held to a rigorous standard when trying to show that an invention would have been obvious in view of the combination of two or more references. See, In re Lee, 61 USPQ2d 1430, 1433 (Fed. Cir. 2002), citing, e.g., In re Dembiczak, 175 F.3d 994, 999, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999) ("Our case law makes clear that the best defense against the subtle but powerful attraction of a hindsight-based obviousness analysis is rigorous application of the requirement for a showing of the teaching or motivation to combine prior art references.").

The Federal Circuit went on to emphasize that the “need for specificity pervades this authority.” In re Lee at 1433 (emphasis added) (citing In re Kotzab, 217 F.3d 1365, 1371, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000) (“particular findings must be made as to the reason the skilled artisan, with no knowledge of the claimed invention, would have selected these components for combination in the manner claimed”).

Applicant respectfully submits that the current grounds of rejection do not satisfy the Federal Circuit’s rigorous standard for demonstrating that the claimed invention would have been obvious in view of the combination of Burt et al. and Stoffel et al.

In particular, there is no teaching or suggestion in either applied patent that would have motivated one skilled in the art to pick and choose certain features (*i.e.*, single row of photosensors as argued by the Examiner) from the scanning apparatus of Stoffel et al. to include in the CCD imager of Burt et al.

Indeed, the grounds of rejection do not point to any specific disclosure in either applied reference to base the alleged motivation that “this allows for continuous imaging without having to wait for the memory region to clear before the next image is taken.” Office Action at page 2. Neither applied patent appears to address this issue, let alone suggest a solution based on the combination/modification.

Stoffel et al. is concerned with the manufacture of long scanning arrays by properly aligning several short scanning arrays. Accordingly, Stoffel et al. relates to a very particular application. There is no discussion in this patent of a memory region or a problem associated with continuous imaging. Also, the discussion of the control system in Stoffel et al. is extremely

vague and does not even teach or suggest the need for multiplication of a register. *See* Stoffel et al. at column 2, line 63 to column 4, line 9.

Burt et al., on the other hand, is concerned with charge multiplication being carried out in a region separate from the image and memory regions. The benefits of the disclosed arrangement in Burt et al. include optimizing the multiplication register independent of the parameters and structure required for conventional functioning of the CCD imager. *See* Burt et al. at column 1, lines 61 to column 2, line 4.

There is no apparent *disclosed* reason for modifying only a portion of the CCD imager 1 in Burt et al. so as to included a single row of sensors for the image area 2 and maintain multiple rows for the store section 3. Simply asserting that the modified structure would allow “for continuous imaging without having to wait for the memory region to clear before the next image is taken” is mere supposition that appears to be rooted in improper hindsight and not any prior art disclosure. Indeed, like Stoffel et al., Burt et al. does not appear to recognize a problem associated with continuous imaging, let alone the Examiner’s solution to such a problem.

In view of at least the foregoing reasons, the Examiner is kindly requested to reconsider and withdraw the rejection of claims 1-5.¹

¹ The Examiner states that “while Burt is silent on the row by row shifting of the signal from the image region to the memory region the examiner stresses that it is impossible for the information of the image region to just appear in the memory region, a shifting must occur and Burt is silent because of the inherency of this fact.” The Examiner’s inherency argument is not supported by any technical disclosure and is not even relied upon in the rejection, since the Examiner specifically cites Stoffel et al. for having the image area step through each row of the memory region.

2. Claims 6-10 Over Ulich (US 5,013,917) In View Of Burt (US 6,444,968) And Stoffel (US 4,712,018).

Claim 6 requires, *inter alia*, that “each row of said image region is stepped through each row of said memory region.” Claim 9 requires, *inter alia*, that “the total number of rows of the image region is less than the total number of rows of the memory region.”

In rejecting claims 6-10 over Ulich (US 5,013,917) in view of Burt (US 6,444,968) and Stoffel (US 4,712,018), the grounds of rejection rely on Stoffel for essentially the same reasons discussed above in the rejection of claims 1-5. As argued above, the combination of Burt et al. in view of Stoffel et al.—whatever form the structure of such combination takes on—is neither taught nor suggested by any of the applied references.

Finally, regarding the alleged combination of Ulich and Burt et al., Applicant maintains the position taken in the last response that the grounds of rejection do not satisfy the requirement to show some motivation *disclosed in the prior art* that would have suggested to the skilled artisan to employ the CCD imager of Burt al. in the lidar system of Ulich. The Examiner’s position that “the sensor used by Ulich and the modified CCD sensor taught by Burt in view of Stoffel are functional equivalents” (Office Action at page 5) is merely conclusory and does not satisfy the Federal Circuit’s rigorous requirements set out in In re Lee.

For at least the foregoing reasons, the Examiner is kindly requested to reconsider and withdraw the rejection of claims 6-10 as well.

Response Under 37 C.F.R. § 1.116
U.S. Application No. 10/759,155

Attorney Docket No.: Q79358

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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